

**On a new *Somanniathelphusa* Bott, 1968, from Vietnam
(Crustacea: Decapoda: Brachyura: Parathelphusidae)**

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Abstract.—A new species of parathelphusid freshwater crab, *Somanniathelphusa pax*, is described from Hanoi, Vietnam. The new species seems to be most closely allied to species from southern China, but differs in the form of the carapace, male abdomen and male gonopods.

Specimens of a freshwater crab recently obtained from a market in Hanoi, Vietnam, proved to belong to an undescribed species of *Somanniathelphusa* Bott, 1968 (family Parathelphusidae Alcock, 1910). The genus *Somanniathelphusa* s. str. as now recognized (Bott 1970, Ng 1988, Ng & Naiyanetr 1993, Naiyanetr 1994), contains six described species: *S. brevipodum* Dai, Song, He, Cao, Xu & Zhong, 1975 [China], *S. chongi* (Wu, 1935) [China], *S. falx* Ng & Dudgeon, 1992 [China], *S. sinensis* (H. Milne Edwards, 1853) (type species) [China], *S. taiwanensis* Bott, 1968 [Taiwan], and *S. zanklon* Ng & Dudgeon, 1992 [Hong Kong]. Naiyanetr (1994) recently reviewed the genus *Somanniathelphusa* and showed that it should be split into four genera: *Somanniathelphusa* s. str., *Sayamia* Naiyanetr, 1994, *Esanthelphusa* Naiyanetr, 1994, and *Chulathelphusa* Naiyanetr, 1994.

The freshwater crab fauna of Vietnam is poorly known. Many of the Indo-Chinese species described by H. Milne Edwards (1853), A. Milne Edwards (1869), De Man (1904) and Rathbun (1904, 1905), did not have precise collection localities. With regards to the parathelphusids belonging or allied to *Somanniathelphusa*, *Potamon* (*Parathelphusa*) *prolatus* was described from "Mois Chero" in northern Cochinchina

(Rathbun 1902:186), a location which is now supposed to be part of northern Vietnam (Türkay & Naiyanetr 1987:392). *Potamon* (*Parathelphusa*) *prolatus*, incorrectly synonymized with *Sayamia dugasti* (Rathbun 1902) by Bott (1970:112), is a valid species and should be transferred to *Esanthelphusa* (P. Naiyanetr, pers. comm.). *Chulathelphusa neisi* was described from somewhere in Cochinchina (Rathbun 1902:186), which may be somewhere in or near Vietnam. Bals (1914:408) reported *Somanniathelphusa sinensis* from Tonkin in Vietnam, but Ng & Dudgeon (1992:757) noted that this record is doubtful and his specimens must be re-examined.

The present paper describes the new species, *Somanniathelphusa pax*. The abbreviations G1 and G2 are for the male first and second pleopods respectively. Measurements are given in millimeters, in the sequence carapace width by carapace length. Specimens examined are deposited in the Zoological Reference Collection (ZRC), Department of Zoology, National University of Singapore.

Systematic Account

Family Parathelphusidae Alcock, 1910
Genus *Somanniathelphusa* Bott, 1968



Fig. 1. *Somanniathelphusa pax*, new species. Holotype male, carapace 41.9 by 32.8 mm (ZRC). Dorsal view.

Somanniathelphusa pax, new species
Figs. 1–3

Material examined.—Holotype male (carapace 41.9 by 32.8 mm) (ZRC), Hanoi, Vietnam, from Dong Xuan market, leg. T. Kosuge, 19 Oct 1993. Paratype female (carapace 34.8 by 26.6 mm) (ZRC), same data as holotype. 2 males (larger, carapace 30.9 by 24.8 mm), 2 females (larger, carapace 31.2 by 25.0 mm) (ZRC), market in Hanoi, Vietnam, leg. A. U. Kara, September 1994.

Description of holotype male.—Carapace broader than long, surfaces smooth, transversely convex (Figs. 1, 2A). Epigastric cristae sharp, distinct, separated by deep longitudinal groove; postorbital cristae sharp, distinct, reaching to beginning of shallow cervical grooves, inner edge of crista reaching to slightly below inner edge of epigastric crista; beyond cervical grooves, cristae are rounded, curving gently to meet bases of first epibranchial teeth; median H-shaped depression distinct, relatively deep (Figs. 1,

2A, B). Frontal margin gently sinuous, confluent with sinuous, smooth supraorbital margin. External orbital angle triangular, inner margin distinctly shorter than outer, outer margin gently convex to straight. Anterolateral margin with 3 strongly developed, sharp epibranchial teeth, first triangular, last spiniform, first and second teeth directed forwards, last tooth directed obliquely outwards (Fig. 2A, B).

Ischium of third maxilliped rectangular, much longer than wide, with deep submedian, longitudinal sulcus; basis separated from ischium by distinct suture; merus squarish, medially depressed; exopod long, reaching to middle of margin of merus, with pronounced subdistal tooth on inner margin and long flagellum (Fig. 2C).

Chelipeds strongly asymmetrical, left larger; outer surfaces of both chelae smooth (Figs. 1, 2F). Merus with small but distinct subterminal spine on dorsal margin. Carpus with strong, sharp spine on inner distal margin; inner margin granulated (Fig. 1). Fin-

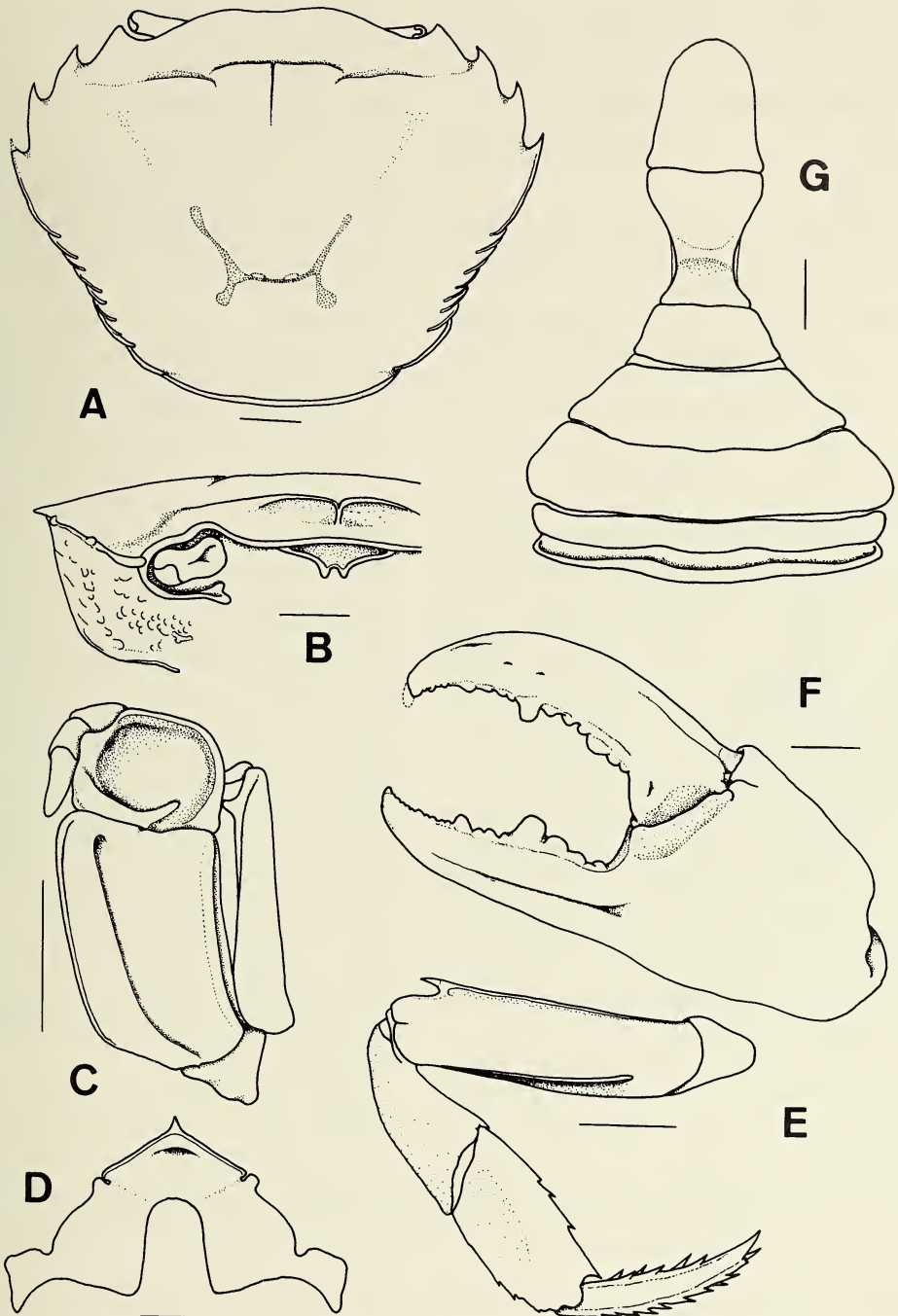


Fig. 2. *Somanniathelphusa pax*, new species. Holotype male, carapace 41.9 by 32.8 mm (ZRC). A, carapace; B, frontal view; C, left third maxilliped (hairs omitted); D, anterior sternites; E, last left ambulatory leg; F, enlarged (left) chela; G, abdomen. Scales = 5.0 mm.

gers of both chelae longer than palm, fingers of smaller chela not distinctly gaping when closed, with numerous denticles along cutting edges; fingers of larger chela strongly gaping when closed, cutting edges lined with several large and numerous smaller teeth (Fig. 2F).

Second pair of ambulatory legs longest. Merus with very strong, distinct dorsal subterminal spine (Fig. 2E).

Male abdominal cavity reaches an imaginary line joining anterior edges of bases of chelipeds (Fig. 2D). Suture between sternites 2 and 3 only present medially, lateral parts obscured; suture between sternites 3 and 4 very shallow, indistinct (Fig. 2D). Male abdomen distinctly T-shaped, telson broadly triangular, lateral margins gently concave, gradually converging towards rounded tip; segment 6 subequal in length to telson, strongly constricted at subproximal part, with low but distinct submedian transverse ridge, length 1.2 times greatest width, distal width 1.3 times proximal width; segments 3–5 progressively more trapezoidal, segments 1 and 2 narrow (Fig. 2G).

G1 terminal and subterminal segments not demarcated (Fig. 3A–C); distal part slender, distal half gradually curving laterally outwards, tip bent laterally; basal part very broad, outer margin distinctly convex when viewed ventrally (Fig. 3D–F). G2 with very short distal segment, 0.07 times length of elongated basal segment (Fig. 3G).

Paratype female.—The paratype female is fully mature. One of its chelae is distinctly larger than the other, but the degree of enlargement of the major chela is not as pronounced as in the holotype male. The branchial regions of the female are distinctly inflated and appear swollen, much more than in the holotype male. In some of the large species of *Somanniathelphusa* (e.g., *S. bangkokensis* and *S. sexpunctata*), larger specimens generally appear to be less inflated than smaller ones. The holotype male of *S. pax* is distinctly larger than the female (carapace 41.9 by 32.8 mm against 34.8 by

26.6 mm). The paratype female agrees with the holotype male in all other non-sexual characters. The non-type specimens show some variation in the form of the frontal margin, from sinuous to almost straight.

Color.—Young males and females are beige to dull brown on all dorsal surfaces, the ventral surfaces being dirty white. Large males vary from brown to purple on the dorsal surfaces.

Discussion.—In characters such as cristae of the carapace, shape of the male abdomen and gonopods, *S. pax* clearly belongs to *Somanniathelphusa* (sensu Naiyanetr 1994) which occurs in China and Taiwan (Dai et al. 1975, Bott 1970, Ng & Dudgeon 1992). The carapace of *S. pax* is more rectangular compared to species like *S. sinensis* and *S. zanklon* which are more oval. The male abdominal segment 6 of *S. pax* is similar in shape to that of *S. sinensis*, *S. zanklon* and *S. falx*, but its telson is less triangular, with the distal part broader. Compared to *S. chongi*, the male abdominal segment 6 of *S. pax* is also proportionately less elongate (length to maximum width ratio 1.2 against 1.4). The deep and distinct longitudinal groove on the pollex of the enlarged male chela is diagnostic for *S. pax*. The G1s of *S. pax* however, differs markedly from all known congeners in having the tip bent laterally. In congeners, the tip is either straight, slightly folded laterally or hooked downwards (fide Wu 1935, Dai et al. 1975, Ng & Dudgeon 1992).

As for allied genera and species known from Vietnam, *S. pax* differs from *Esanthelephusa prolatus* in that the anterolateral margin of *E. prolatus* is more convex, with the smaller epibranchial teeth directed forwards (margin less convex in *S. pax*, with the epibranchial teeth relatively larger and the last tooth directed obliquely outwards), the outer surface of the pollex of the enlarged male chela is smooth, without a longitudinal groove (longitudinal groove distinct in *S. pax*) and the male abdominal segment 6 is relatively shorter (length to

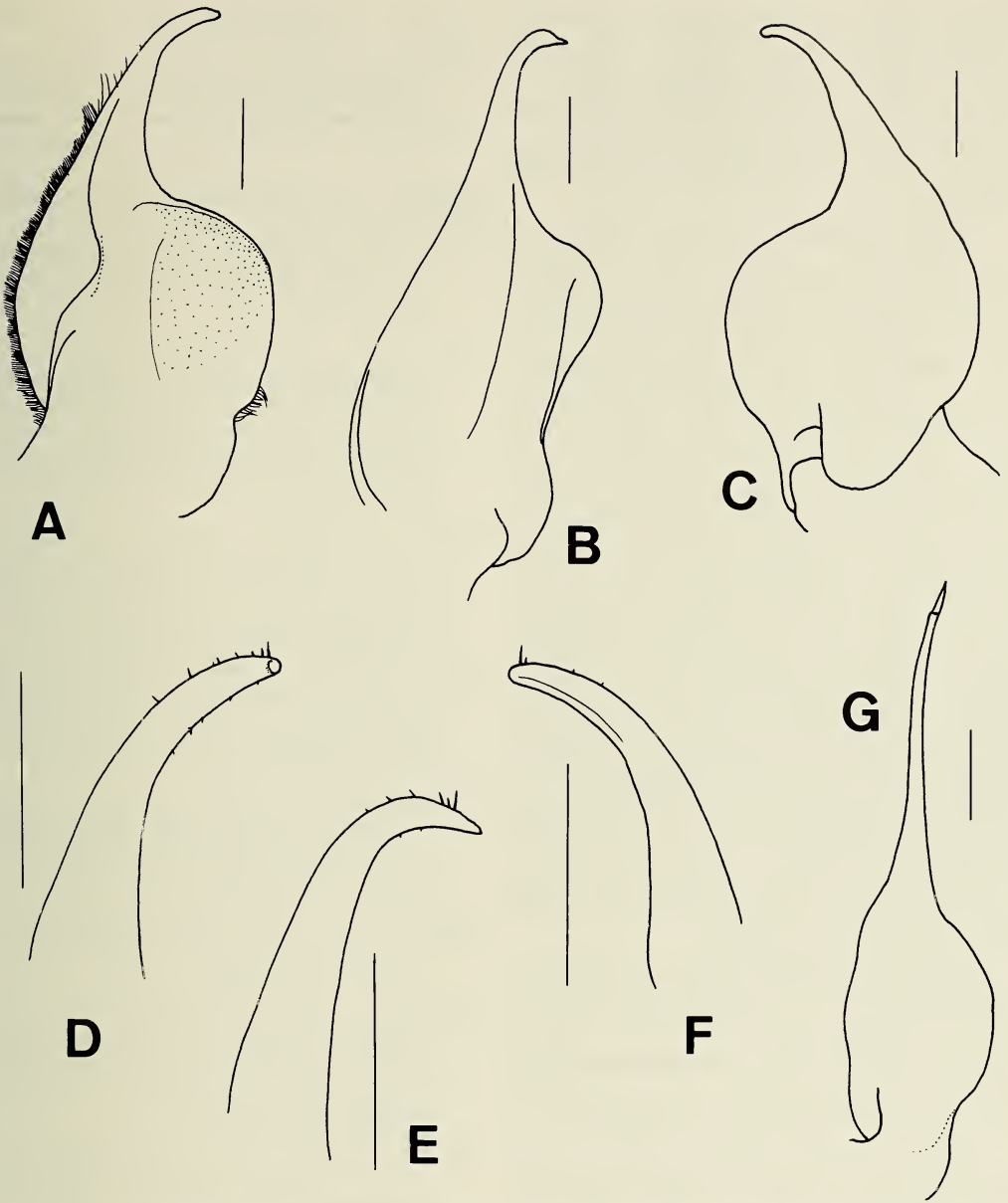


Fig. 3. *Somanniathelphusa pax*, new species. Holotype male, carapace 41.9 by 32.8 mm (ZRC). A–C, left G1; D–F, distal part of left G1; G, left G2. A, D, ventral views; C, F, dorsal views; B, E, ventro-marginal views. Scales = 1.0 mm.

maximum width ratio 0.9 against 1.2) with the distal width much wider than the proximal width (distal to proximal width ratio 1.6 in *E. prolatus*, 1.3 in *S. pax*) (fide Rathbun 1905:245, fig. 59, pl. XI fig. 4). The G1 of *E. prolatus* s. str. is not known.

The dorsal surface of the carapace of *Chulathelphusa neisi* is not only distinctly less convex than all other *Somanniathelphusa pax*, the distal male abdominal segments are not slender and there is no distinct constriction on segment 6 (length to maximum width

ratio 1.0; distal to proximal width ratio 1.1) (cf. Rathbun 1905:249, fig. 61, pl. XI fig. 5). The first author has examined the G1 of *C. neisi*, and it is straighter, with the distal parts not curved or hooked, and the terminal segment distinctly demarcated compared to *S. pax*.

The type specimens of *S. pax* were obtained by the second author from a market in Hanoi which had almost certainly come from rice-fields near the city. The first author subsequently received additional specimens (non-types) from Hanoi and the species is apparently frequently sold in markets. The very low prices and abundance of the crabs strongly suggest that they came from the neighborhood of Hanoi. The collection of rice-field crabs for food is a common practice in Indo-China. The first author has observed this often in Thailand, and in every instance, the crabs had been collected from slow-flowing streams or rice-fields on the outskirts of the town and sold as a cheap source of protein. In Thailand, crabs are kept dried (the individuals often caked in mud) and can be kept alive for long periods provided they are kept cool (see Ng & Naiyanetr 1993:43). They are eaten in a variety of ways, but are usually fried with spices until they are crispy.

The study of the freshwater crab fauna of Vietnam is still very much in the exploration and survey stage. The number of taxa known is likely to increase substantially in the coming years as the country becomes more open to the scientific community.

Etymology.—The species name is derived from the Latin for peace. Used as a noun in apposition.

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